

REMARKS

This is a full and timely response to the nonfinal Office Action of August 9, 2002.

Reconsideration and allowance of the application and all presently pending claims are respectfully requested.

Upon entry of this Response, claims 46, 48, and 63 are pending in this application.

Claim 46 is directly amended herein, while new claim 63 has been added. In addition, new claim 63 is supported by the specification on pages 81, 82, 84, and 88, and in Table 4 on page 111. It is believed that the amendments add no new matter to the present application.

The Examiner has rejected claim 47 under 35 U.S.C. §112, second paragraph for being indefinite. In addition, claims 46-48 are rejected under 35 U.S.C. §112, first paragraph, for containing subject matter that was not described in the specification. Furthermore, claims 46 and 47 have been rejected under 35 U.S.C. §102(b) as purportedly being anticipated by *Zwiener et al.* (U.S. Patent Number 5,364,955).

35 U.S.C. §112 Rejections

The rejection of claim 47 is moot because claim 47 has been canceled. Applicants have amended claim 48 to specify that the molecular weight is a "number" average molecular weight and, therefore, the rejection should be withdrawn.

35 U.S.C. §102(b) Rejection

Claim 46

Claim 46 presently stands rejected under 35 U.S.C. §102(b) as allegedly being unpatentable over *Zwiener*. Applicants submit that the rejection to claim 46 under 35

U.S.C. §102 should be withdrawn because *Zwiener* does not disclose, teach, or suggest the “a secondary amino compound excluding maleic acid diester and fumaric acid diester” in amended claim 46. In contrast, *Zwiener* discloses “N-alkoxysilylalkyl-aspartic acid esters [that] are prepared by the reactions of equimolar quantities of amino-alkyl alkoxysilanes with maleic or fumaric acid esters.” (Abstract).

The present invention, as claimed in claim 46, is advantageous in that a resin with desired physical properties (*e.g.*, curing speed and hardness) could be made by controlling a substituted group at the terminal of compound (b). For example, if a maleimido compound is used for compound (b), a rigid resin is obtained. If an acrylsilane compound is used for compound (b), a very fast curable polymer having two hydrolysable silicon groups in close position with each other in the molecule is obtained. Thus, the rejection to claim 1 under 35 U.S.C. §102 should be withdrawn.

Claims 48 and 63

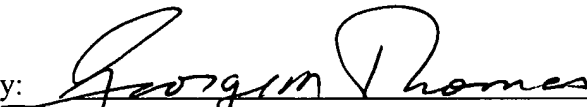
Claims 48 and 63 presently stand rejected in the Office Action under 35 U.S.C. §102(b) as allegedly being anticipated by *Zwiener*. Applicants respectfully submit that pending dependent claims 48 and 63 include every feature of independent claim 46 and that *Zwiener* fails to disclose, teach, or suggest at least the features of claim 46 highlighted hereinabove. Thus, pending dependent claims 48 and 63 are allowable over the prior art of record. *In re Fine*, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988).

CONCLUSION

In light of the foregoing amendments, Applicants respectfully submit that claims 46-50 are in condition for allowance. Favorable consideration and allowance of the present application and all pending claims are hereby courteously requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (770) 933-9500.

Respectfully submitted ,

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UNNOTATED VERSION OF MODIFIED CLAIMS TO SHOW CHANGES MADE

The following is a marked up version of the amended claims. Amend the following claims by adding the language that is underlined (“ ”) and by deleting the language that is enclosed within brackets (“[]”):

46. (Once amended) A process for the preparation of urethane resins comprising the steps of
- (1) reacting a compound(a) having a hydrolyzable group selected from the group consisting of alkoxy and acetoxy groups directly bonded to 1 to 10 silicon atoms and having an organic group(I) selected from the group consisting of primary amino, secondary amino and acryloyl groups, with a compound(b) being capable of reacting with said organic group(I) to form a secondary amino compound excluding maleic acid diester and fumaric acid diester, in order to produce a product(A) having said hydrolyzable group directly bonded to 1 to 10 silicon atoms and having less than two secondary amino groups in one molecule;
- (2) reacting a polyisocyanate compound (compound(d)), with a compound selected from the group consisting of: a polyol compound (compound(c)), a polythiol compound (compound(c-1)), and a compound (product(C)) having [an] a number average molecular weight of 100-25000 and having at least 0.2 terminal secondary amino groups in one molecule, in order to produce a (thio)urethane pre-polymer (product(B)) having a terminal isocyanate group in an amount of 4 % or less by weight of said product(B), wherein said product(C) is obtained by reacting a compound(e) having an organic group(II) selected from the group consisting of amino and acryloyl groups, with a compound(f) having [an] a number average molecular weight of 100-25000 and being capable of reacting with said organic group(II) to form a secondary amine compound; and
- (3) reacting said product(A) with said product(B) in the proportions of at least 0.5 equivalent of said product(A) per free isocyanate group of said product(B).

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